Visual Index

Introduction

The Intru-Lok bite type fitting was developed by Parker Hannifin and introduced to the U.S. market in the late 1950's. This fitting addresses those applications that require a bite by the ferrule in brass, copper, aluminum and plastic tubing systems. The Intru-Lok fitting is a flareless fitting that consists of a body, a one-piece precision-machined ferrule, and a nut. On assembly, the ferrule "bites" into the outer surface of the tube with sufficient strength to hold the tube against pressure. The ferrule also forms a pressure seal against the fitting body.

Intru-Lok fittings allow the fitting assembler to visually inspect the bite quality, thus significantly minimizing the risk of improper assembly and related service problems.

Intru-Lok fittings are routinely used in markets, such as: Machine tools, chemical, oil refineries, paper making, thermo-plastics processing, air and lube lines, pilot lines, panel boards, etc.

Design and Construction

The three components of Intru-Lok fittings are designed and manufactured to produce a reliable, leak free joint upon assembly.

The Intru-Lok Body – Intru-Lok fittings' bodies are available in over fifteen configurations. The shaped products (i.e., elbows, tees, and crosses) are hot forged, then machined to the stringent Intru-Lok fitting specifications. Straight products are made from cold drawn bar stock. The cold drawing operation ensures consistently tight dimensional tolerances, as well as significantly improved strength.

The Intru-Lok Ferrule – Intru-Lok fitting ferrules are precision machined with all dimensions and surfaces, particularly the critical bite edge, monitored on an ongoing basis.

The Intru-Lok Nuts – Intru-Lok fitting nuts are machined from cold drawn bar stock. The cold drawing operation provides a more tightly packed grain structure, thus improving the material's strength. In addition, cold forming significantly improves the fatigue properties or endurance limits of the nuts.

How Intru-Lok Fittings Work

In assembly, the ferrule is driven forward on the tube by the nut during pre-set. As the ferrule moves forward it contacts the tapered seat area of the body, which causes the ferrule to cam inward into the tube. The leading edge of the ferrule is thus able to make a clean 360 degree cut into the outside diameter of the tubing. This cut in the tubing is often referred to as a "Bite"; thus the term: **Bite Type Fitting**. As the ferrule makes its bite, a small ridge of tube material is raised up in front of the ferrule.

Assembly and Installation

Please refer to Section T for the assembly and installation instructions for Intru-Lok fittings.

Pressure Rating

The contact of the tube ridge with the ferrule's front face and bite edge gives the fitting its ability to retain pressure without leaking or blowing off. When properly assembled to the recommended tubing, Intru-Lok fittings will consistently seal up to 1500 psi working pressure in all sizes.

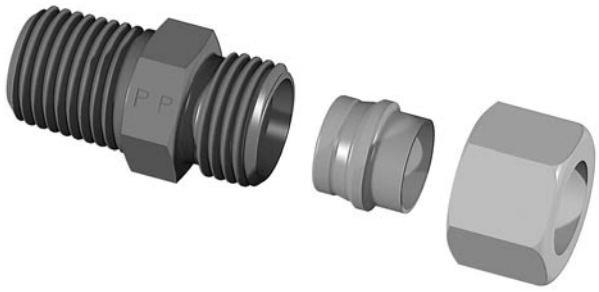

Fig. E1 – Intru-Lok Components: Body, Ferrule and Nut

Intru-Lok Fittings	Brass	
	ASTM	Type
Forged Bodies	B124	CA377
Bar Stock Bodies	B16	CA360
	B453	CA345
Bar Stock Tube Nuts	B16	CA360
Tube Ferrules	B16	CA360

Table E1 – Standard Material Specifications for Intru-Lok Fittings

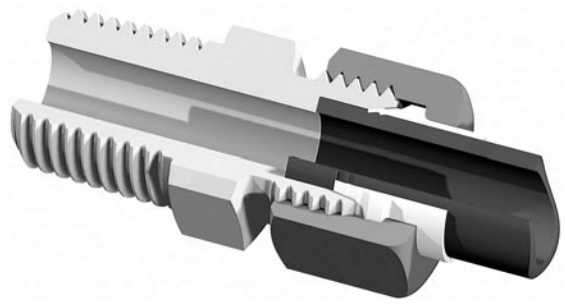

Fig. E2 – Assembled Intru-Lok Fitting

Dimensions and pressures for reference only, subject to change.